



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,866	08/06/2003	Kazuyoshi Akie	31869-191571	7646

26694 7590 06/26/2006

VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20045-9998

EXAMINER

HAROLD, JEFFEREY F

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,866

Applicant(s)

AKIE, KAZUYOSHI

Examiner

Jefferey F. Harold

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The references listed in the Information Disclosure Statement submitted on August 06, 2003, have been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by He et al., (United States Patent Application Publication 2004/0001450), hereinafter referenced as He.

Regarding claim 1, He discloses monitoring and control of an adaptive filter in a communication system. In addition, He discloses an anti-howling circuit for use in an environment having a inherent first transducer for converting a received signal to acoustic output, an inherent second transducer for converting acoustic input to an outgoing signal, and an adaptive echo canceller (28) for generating a predicted echo signal from the received signal by multiplying samples of the received signal by respective tap coefficients, subtracting (34) the predicted echo signal from the outgoing signal (Sin 39) to generate a residual signal (46), and adaptively updating the tap

coefficients, wherein the monitor and control unit (30), which reads on claimed “anti-howling circuit”, detects howling according to an effect of the predicted echo signal, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 2, He discloses everything claimed as applied above (see claim 1), in addition He discloses further comprising an attenuating circuit for attenuating the residual signal when howling is detected, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 3, He discloses everything claimed as applied above (see claim 1), in addition He discloses an initializing circuit for initializing the tap coefficients when howling is detected, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 4, He discloses everything claimed as applied above (see claim 1), in addition He discloses a first envelope detector for detecting a first envelope of the outgoing signal; a second envelope detector for detecting a second envelope of the residual signal; and a decision circuit for comparing the first envelope with the second envelope, thereby detecting howling, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 5, He discloses everything claimed as applied above (see claim 4), in addition He discloses wherein the first envelope and the second envelope are power envelopes, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 6, He discloses everything claimed as applied above (see claim 4), in addition He discloses wherein the decision unit detects howling when the second envelope exceeds the first envelope by at least a predetermined ratio, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 7, He discloses everything claimed as applied above (see claim 4), in addition He discloses an echo loss calculator for calculating echo attenuation on an echo path from the received signal to the outgoing signal, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099], [0174]-[0188] and exhibited in figures 2, 6-9, 14 and 25-27.

Regarding claim 8, He discloses everything claimed as applied above (see claim 7), in addition He discloses wherein the decision unit detects howling when the second envelope exceeds the first envelope by a threshold ratio that depends on the calculated echo attenuation on the echo path, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099], [0174]-[0188] and exhibited in figures 2, 6-9, 14 and 25-27.

Regarding claim 9, He discloses everything claimed as applied above (see claim 8), in addition He discloses wherein the threshold ratio increases as the calculated echo attenuation increases, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099], [0174]-[0188] and exhibited in figures 2, 6-9, 14 and 25-27.

Regarding claim 10, He discloses everything claimed as applied above (see claim 1), in addition He discloses a first envelope detector for detecting a first envelope of the received signal; a second envelope detector for detecting a second envelope of the residual signal; and a decision circuit for comparing the first envelope with the

second envelope, thereby detecting howling, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 11, He discloses everything claimed as applied above (see claim 10), in addition He discloses wherein the first envelope and the second envelope are power envelopes, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claim 12, He discloses everything claimed as applied above (see claim 10), in addition He discloses wherein the decision unit detects howling when the second envelope exceeds the first envelope by at least a predetermined ratio, as disclosed at paragraph [0027], [0042]-[0049], [0093]-[0099] and exhibited in figures 2, 6, 7, and 14.

Regarding claims 13-17, He discloses everything claimed as applied above (see claims 12), hence claims 13-17 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1-12.

Citation of Pertinent Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McCaslin et al. (United States Patent 5,668,794), discloses a variable gain echo suppressor.

Hosoi (United States Patent 6,097,971), discloses a hands-free speech communication apparatus.

Conclusion

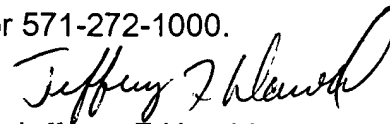
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is 571-272-7519. The examiner can normally be reached on Monday - Friday 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JFH
June 22, 2006



Jefferey F Harold
Primary Examiner
Art Unit 2614